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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/486,069	06/07/1995	DEAN ENGELHARDT	ENZ-5(D8)(C2	6278

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EXAMINER
MARSCHEL, ARDIN H

ART UNIT	PAPER NUMBER
1631	89

DATE MAILED: 07/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
08/486,069	Engelhardt et al.
Examiner	**Art Unit**
Ardin Marschel	1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *9/12/02, 10/10/02, and 12/27/02*

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *see attached list* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideratio

5) ☒ Claim(s) *1706* is/are allowed.

6) ☒ Claim(s) *see attached list* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examine

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) (2 sheets)
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Claims pending in 08/486,069 and their status

Pending claims:

569-595, 597-643, 645, 646, 648-651, 654-679, 681, 682, 684-687, 690-714, 716, 717, 719-747, 749-797, 800-803, 806-831, 833, 834, 836-839, 842-866, 868, 869, 871-899, 901-947, 949, 950, 952-955, 958-983, 985, 986, 988-991, 994-1018, 1020, 1021, 1023-1051, 1053-1099, 1101, 1102, 1104-1107, 1110-1135, 1137, 1138, 1140-1143, 1146-1170, 1172, 1173, 1175-1250, 1252, 1253, 1255-1258, 1261-1294, 1296-1407, 1409-1568, 1570-1612, and 1614-1775

Rejected claims:

569-595, 597-643, 645, 646, 648-651, 654-679, 681, 682, 684-687, 690-714, 716, 717, 719-747, 749-797, 800-803, 806-831, 833, 834, 836-839, 842-866, 868, 869, 871-899, 901-947, 949, 950, 952-955, 958-983, 985, 986, 988-991, 994-1018, 1020, 1021, 1023-1051, 1053-1099, 1101, 1102, 1104-1107, 1110-1135, 1137, 1138, 1140-1143, 1146-1170, 1172, 1173, 1175-1250, 1252, 1253, 1255-1258, 1261-1294, 1296-1407, 1409-1568, 1570-1612, 1614-1705, and 1707-1775

Allowed claim:

1706

Applicants' arguments and amendments; filed 9/12/02, 10/10/02, and 12/27/02 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

REQUEST FOR INTERFERENCE

The Request for Interference, filed 12/21/01, is again acknowledged as having been received and is further responded to as follows. The Request for Interference is DENIED under 37 CFR § 1.607 as being not fully supportive of instituting an interference regarding U.S. Patent 5,821,058 as requested. Consideration of the instant claims as well as the claims of said Patent reveals that either a "chromophore or fluorophore" or "chromophores or fluorophores" is required for detection practice in all of the claims of said Patent. In contrast, the instant claims discussed in said Request for Interference describe detection via non-radioactive labeling of nucleic acid fragments. The Request for Interference has not specifically discussed or supplied evidence that either "chromophore or fluorophore" or "chromophores or fluorophores" as detection practices are encompassed within the instant claims as interfering subject matter. The instant "non-radioactive" labeling citations in the

instant claims are very generic and broad. Potentially persuasive arguments and/or evidence may be utilized in order to support the "chromophore or fluorophore" or "chromophores or fluorophores" practice of said Patent as being obvious species within the instantly claimed generic and broad "non-radioactive" labeling practice. Such argument(s) and/or evidence, however, has not been set forth in said Request for Interference.

Yet another limitation that is present in the claims of said Patent, but not sufficiently supported as being included as being interfering subject matter is that of the practice of utilizing "different indicator molecules" in the claimed methods. This is noted below as being NEW MATTER in the instant claims and thus also is a distinction between the claims of said Patent and the instantly claimed subject matter as not being supported as filed in the instant disclosure. This NEW MATTER issue also results in the differential labeling of fragments to differentially detect bases A, C, G, or T to lack interfering subject matter with the instant claims and is therefore insufficiently supported regarding the request for Interference. A related insufficiently supported limitation in the instant claims which is set forth in the claims of said Patent is that of "spectral characteristics" as being utilized in the practice of distinguishing nucleic acid fragments, such as on a sequencing gel. The instant claims lack any description of "spectral characteristics" much less their use

per se for distinguishing nucleic acid fragments.

Therefore, for the reasons described above, said Patent is presently considered a non-obvious improvement specie of invention over the instantly claimed invention and therefore not properly subject to an Interference proceeding. To repeat from above, the Request for Interference, filed 12/21/01, is DENIED.

ABSTRACT

The Abstract of the Disclosure is objected to because it exceeds 150 words in length. A new shorter replacement abstract submitted on its own separate sheet of paper is required. Correction is required. See M.P.E.P. § 608.01(b).

NEW MATTER REJECTIONS:

Claims 617-620, 622, 623, 769-772, 774, 775, 921-924, 926, 927, 1073-1076, 1078, 1079, 1224, 1225, 1228, 1229, 1235-1238, 1240, 1241, 1341-1344, 1346, 1347, 1436-1444, 1475, 1477-1581, 1629, 1630, 1633, 1634, 1640-1643, 1645, 1646, 1709, 1723-1726, 1740, 1741, 1758, and 1759 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection is reiterated from the previous office action, mailed 3/12/02. Applicants argue that pages 97-98 of the

specification as filed supports the attachment of the Sig moiety through any chemical linkage to either the base, sugar, or phosphoric acid component of a nucleotide. In response this is a generic disclosure which does not specify or disclose the specific linkages as contained in the above claims rejected as listed above.

Claims 1475, 1477-1581, 1709, 1723-1726, 1740, 1741, 1758, and 1759 contain limitations to the practice of different or same indicator molecules. NEW MATTER is present via the specific limitation in claim 1741, line 3, for example, directed to "different indicator molecules". This practice of generic "different" indicator molecules is NEW MATTER. The above "different" indicator molecules practice has not been found as filed and therefore is NEW MATTER. It is acknowledged that the instant disclosure as filed does have written basis for multiple non-radioactively labeled nucleotides within a nucleic acid fragment that is so labeled as well as multiple labeled probes or fragments, but that this written basis does not include multiple fragments which are of either of a "different" or "same" type specifically as an added limitation over signal entities or labeled fragments. Certain claims as listed above are included due to depending directly or indirectly from claims which specifically contain said NEW MATTER.

SCOPE OF ENABLEMENT REJECTION:

Claims 569-595, 597-605, 608-643, 645, 646, 648-651, 654-679, 681, 682, 684-687, 690-714, 716, 717, 719-747, 749-752, 755-757, 760-763, 766-776, 786-797, 800-803, 806-822, 859-866, 868, 869, 871-899, 901-904, 907-909, 912-915, 918-928, 938-947, 949, 950, 952-955, 958-974, 1011-1018, 1020, 1021, 1023-1051, 1053-1056, 1059-1080, 1090-1099, 1101, 1102, 1104-1107, 1110-1126, 1163-1170, 1172, 1173, 1175-1210, 1213-1229, 1232-1246, 1248-1250, 1252, 1253, 1255-1258, 1261-1294, 1296-1329, 1332-1407, 1409, 1410, 1440-1468, 1473-1488, 1491-1494, 1497-1568, 1570-1612, 1614-1616, 1619-1634, 1637-1705, and 1707-1775 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for being limited to furanose moieties as the SM structure in the instant claims, does not reasonably provide enablement for the generic limitation given as "sugar". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized in Ex parte Forman, 230 USPQ 546 (BPAI 1986) and reiterated by the Court of Appeals in In re Wands, 8 USPQ2d 1400 at 1404 (CAFC 1988). The factors to be considered in determining whether undue

experimentation is required include: (1) the quantity of experimentation necessary, (2) the amount or direction presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. The Board also stated that although the level of skill in molecular biology is high, the results of experiments in genetic engineering are unpredictable. While all of these factors are considered, a sufficient amount for a *prima facie* case are discussed below.

This rejection is reiterated from the previous office action, mailed 3/12/02, in that furanose is reasonably enabled for nucleotide embodiments, including, of course, ribose and deoxyribose, and not broadly "sugar" moieties. Applicant argue that a sugar may adopt a variety of conformations. In response sugar conformational forms are known in the art but not regarding such forms within nucleic acids which are also well known to form complementary structures with very defined and specific binding parameters. Thus, speculating about what a generic sugar may conform into lacks corresponding predictability regarding the content of such a structure within a nucleic acid polymer. Computer modeling also is deemed speculative at best without some type of experimental verification. It is well known in the

biochemical arts that conformational computer modeling is still not reliably predictive of a wide variety of molecular structures.

VAGUENESS AND INDEFINITENESS

Claims 569-595, 597-643, 645, 646, 648-651, 654-679, 681, 682, 684-687, 690-714, 716, 717, 719-747, 749-797, 800-803, 806-831, 833, 834, 836-839, 842-866, 868, 869, 871-899, 901-947, 949, 950, 952-955, 958-983, 985, 986, 988-991, 994-1018, 1020, 1021, 1023-1051, 1053-1099, 1101, 1102, 1104-1107, 1110-1135, 1137, 1138, 1140-1143, 1146-1170, 1172, 1173, 1175-1250, 1252, 1253, 1255-1258, 1261-1294, 1296-1407, 1409-1568, 1570-1612, and 1614-1705, and 1707-1775 are rejected, as discussed below, under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 710 are vague and indefinite due to a lack of antecedent basis for "indicator molecules" as in line 2 therein. Claims from which claim 710 depends cite "non-radioactively labeled fragments", for example in claim 569, but do not describe these as "molecules" per se nor broadly as an "indicator molecule". Claim limitations worded as "non-radioactively labeled" are significantly different in scope as compared to the limitation "indicator". Thus, claims 710 etc. as listed above lack clear antecedent basis for the phrase "indicator molecules".

Also, claim 693 cites "A" as comprising an indicator molecule. This "indicator molecule" limitation is unclear as to whether "A" contains a moiety which is a label of some type, used as an indicator, or a "molecule". A moiety is reasonably interpreted as a covalently attached segment within "A" whereas a "molecule" is normally a separate covalent structure which may have binding characteristics but is not covalently part of another chemical structure. Thus, the metes and bounds of an "indicator molecule" which is comprised within A are vague and indefinite as in claims 693 etc. This same unclarity is in claim 694 etc. which cites a "compound" within confusingly another molecule. Clarification via clearer claim wording is requested on these issues regarding claims 657-662, 670, 693-707, 710-712, 809-814, 845-850, 862-864, 961-964, 997-1002, 1014-1017, 1113-1118, 1149-1157, 1162, 1166-1168, 1264-1270, 1287-1289, 1373-1378, 1386, 1400-1402, 1404, 1445-1461, 1467, 1468, 1531-1536, 1544, 1545, 1561-1563, 1577, 1578, 1671-1677, 1696, 1723-1726, 1740, and 1741. Certain claims are included here in due to depending from claims which contain the above vague and indefinite wording.

Claims 569-595, 597-643, 645, 646, 648-651, 654-679, 681, 682, 684-687, 690-714, 716, 717, 719-747, 749-797, 800-803, 806-831, 833, 834, 836-839, 842-866, 868, 869, 871-899, 901-947, 949, 950, 952-955, 958-983, 985, 986, 988-991, 994-1018, 1020, 1021, 1023-1051, 1053-1099, 1101, 1102, 1104-1107, 1110-1135, 1137,

1138, 1140-1143, 1146-1170, 1172, 1173, 1175-1250, 1252, 1253, 1255-1258, 1261-1294, 1296-1407, 1409-1568, 1570-1612, and 1614-1705, 1707-1775 are vague and indefinite as citing various "analogs" as well as specifically "nucleotide analogs" without defining the metes and bounds of what such analogs are. It is noted that analogs may be anything if not limited as to metes and bounds. In claim 569, for example, lines 6-12 and 16-17, various analogs are cited such as, "nucleotide analogs", "sugar analog", "phosphate analog", and "base analog". It is additionally noted that specifically the phrase "nucleotide analogs" in line 7 of claim 569 is set forth within the phrase "detectable non-radioactively modified or labeled nucleotides or nucleotide analogs". The usage of the limitation "or" twice in this phrase may be interpreted in various conflicting and therefore unclear ways. One interpretation is that the phrase "non-radioactively modified" is meant to only be a limitation in the phrase "non-radioactively modified or labeled nucleotides" with the second nucleotide type phrase being a completely separate set of nucleotides which are only "nucleotide analogs". Such separate "nucleotide analogs" are disclosed in the instant specification as filed to include radioactively labeled nucleotides because several of them are set forth in the specification on pages 82-85. Also, consideration of pages 4-5 of the SUMMARY OF THE INVENTION section of the instant specification as filed indicates

that "non-disruptive" modification of nucleic acid material is cited without any limitation as to whether this is limited to non-radioactive labeling or not. Thus, the page 82-85 radioactive labeling description combined with the pages 4-5 open description of the summary of the invention supports the above interpretation of the claims. Alternatively, applicants may have wanted to limit the modified or labeled nucleotide embodiments of the instant claims to only non-radioactively labeled or non-radioactively modified nucleotides. As worded the instant claims are unclear which is meant as to the metes and bounds of the instant claims. These claims also lack clear antecedent basis for "non-radioactively labeled fragments" in line 13, in that labeling may be either non-radioactive or radioactive for nucleic acid fragments as cited in lines 6-12, leaving some fragments without further usage in the process as claimed in the last 6 lines of claims 569 etc. Claims 1411 and those dependent therefrom are also included as having vague and indefinite metes and bounds as to whether a non-radioactively labeled protein may also be radioactively labeled even though it is detected via its non-radioactive characteristics therein. Clarification via clearer claim wording is requested. Claim dependent from claims which cite the above unclear wording are also rejected due to their dependence.

PRIOR ART REJECTIONS

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1411-1420, 1426, 1428, 1445-1449, 1451, 1454, 1455, and 1463-1471 are rejected under 35 U.S.C. § 102(e)(2) as being clearly anticipated by Kourilsky et al.(P/N 4,581,333), or, alternatively, under 35 U.S.C. § 102(b) as being clearly anticipated by Kourilsky et al.(GB 2,019,408).

This rejection is maintained and reiterated from the previous office action, mailed 3/12/02. Applicants argue that claim 1411 has been amended to require that the protein bind to a

specific nucleic acid sequence. In response, this rejection is maintained as the protein binding in the references are still deemed as binding to that specific nucleic acid sequence which has the non-radioactive label incorporated therein.

Claims 1582-1597, 1599-1601, 1603, 1605-1607, 1609-1612, 1615-1639, 1642-1644, 1648-1651, 1653, 1655, 1656, 1671-1673, 1677, 1686-1689, 1695-1699, 1758, and 1760-1765 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Dunn et al. [Cell 12:23 (1977)].

Dunn et al. discloses the preparation of RNA which is a hybrid of adenovirus type 2 (Ad2) RNA and SV40 sequence on page 23, second column, first full paragraph. This RNA hybrid molecule is then utilized for hybridization assay as summarized in the bridging paragraph between pages 23 and 24 and depicted as a sandwich hybridization method in Figure 1 on page 24. The probe sequence is the Ad2 segment which hybridizes onto target DNA as shown in Figure 1. The SV40 tail is linked to this Ad2 probe sequence via normal phosphate linkage. Thus, a reasonable interpretation is that the probe has been modified by a signal moiety being added onto the phosphate end nucleotide of said Ad2 probe. The hybrid RNA probe is RNA as isolated from cells, a living eukaryotic organism as required in instant claims 1584 etc., infected with an Ad2-SV40 virus hybrid as described on page 23, second column, first full paragraph, in the first two

sentences therein. RNA is well known to be detectable via a variety of techniques such as UV absorbance etc., thus resulting in such RNA being non-radioactively detectable. It is noted that instant claim 1598 is directed to the preparation of a non-radioactively detectable nucleic acid. Even though the reference goes on to utilize the RNA hybrid in an assay where radioactive detection is applied, the basic preparation of the non-radioactively detectable RNA hybrid is deemed to already anticipate the above listed instant claims at that stage of performance of said nucleic acid preparation. It is also noted that several of the above listed rejected claims are included in that they only limit the practice of Sig labeling on a nucleobase etc. whereas the independent claim from which they ultimately depend includes the option of PM labeling which is the basis for this rejection. Thus, claims such as instant claims 1760-1765 limit only the nucleobase option within claim 1582 from which they depend but therefore reasonably still include the PM labeling option which is not further limited by claims 1760-1765.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1411-1417, 1419, 1428, 1430, 1432, 1434, 1435, 1440, 1441, 1444-1459, and 1462-1471 are rejected under 35 U.S.C. § 103(a) as being unpatentable over either of Langer et al.[PNAS 78:6633(1981)] or Dale et al.[Biochemistry 14:2458(1975)].

This rejection is maintained and reiterated from the previous office action, mailed 3/12/02. Applicants argue that claim 1411 has been amended to require that the protein bind to a specific nucleic acid sequence. In response, this rejection is maintained as the protein binding in the references are still deemed as binding to that specific nucleic acid sequence which has the non-radioactive label incorporated therein.

Claims 1298-1305, 1315, 1318, 1320, 1324-1333, 1335-1340, 1345-1352, 1358, 1359, 1371, 1373, 1379, 1385-1390, 1399-1401, 1403, 1404, 1406, 1407, 1409, 1582, 1583, 1585-1591, 1593-1597, 1599, 1601, 1605-1609, 1611, 1612, 1614-1618, 1620-1639, 1644-1650, 1656, 1657, 1669, 1671, 1677, 1678, 1684-1688, 1695-1699,

1705, 1708, 1709, 1711, 1725, 1726, 1730, 1749-1751, and 1758-1761 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hartman et al.[Biopolymers 20:2635(1981)].

This rejection is maintained and reiterated from the previous office action, mailed 3/12/02. Applicants argue that the authors' discussion on page 2645 of "one initiator can cause the linking of many methacrylate monomer units" results in signal generation from small quantities of unbound probe in the absence of any hybridized target. In response, the concern regarding signal generation in the absence of any hybridized target has not been found in the reference. Instead, the reference describes the linking of many said monomer units as an improvement in hybridization technique to increase the sensitivity of such an assay. Thus, applicants' concern regarding a signal where there is a lack of hybridized target is an allegation about the description in the reference without factual support as to whether it is a concern or not and is not shared by the authors of said reference. Thus, this argument to cast doubt on the reference improvement description is without factual support and therefore non-persuasive. The second argument is directed to the Figure 5 description of non-hybridization of the azo modified oligomers to what might be complementary which is poly(I). This is a control experiment which demonstrated that the azo modified poly(C) tail added to a probe will not itself hybridize

significantly to complementary nucleic acid, poly(I) as shown in Figure 5. This result is discussed in the last few sentences of the abstract on page 2635 of the reference which describes this in order to verify that probe binding is due to the portion, poly(A) in the abstract, to which the azo segment is added and not mediated by azo segment binding itself to target nucleic acid. Thus, this Figure 5 result supports the improvement as described in the reference as the label neither disrupts nor gives false positive signal during so labeled probe in a hybridization assay. Therefore, applicants' argument only strengthens the motivation to utilize probes labeled as in the reference and further supports this rejection.

IDS

The receipt of IDSs, filed 9/12/02 and 10/10/02, is acknowledged. One citation thereon is lined through as not having been translated into English and therefore cannot be considered.

Claim 1706 is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703)305-3014 or (703)308-4242.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to

Ardin Marschel, Ph.D., whose telephone number is (703)308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703)308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (703)305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

June 27, 2003

ARDIN H. MARSCHEL
PRIMARY EXAMINER